

## AMENDMENTS TO THE CLAIMS

1.-25. (Cancelled)

26. (Currently amended) A method for aiding in the determination of whether a ~~mammal~~ patient is susceptible to or at risk of a disease associated with  $\beta$ -amyloid formation and/or aggregation, said method comprising:

- (a) determining, in a ~~first~~ sample of brain extract or cerebrospinal fluid obtained from said ~~mammal~~ patient, the amount of a N-terminal truncated and/or post-translationally modified  $\beta$ -amyloid 42 variant selected from the group consisting of  $A\beta(2-42)$ ,  $A\beta(3-42)$ ,  $A\beta(4-42)$ ,  $A\beta(5-42)$ ,  $A\beta(6-42)$ ,  $A\beta(7-42)$ ,  $A\beta(8-42)$ , and  $A\beta(9-42)$ ;
- (b) comparing the amount of  $\beta$ -amyloid variant determined in step (a) with the amount of said variant typically present in control samples obtained from one or more patients ~~known to suffer, or known not to suffer~~[[,]] from said disease associated with  $\beta$ -amyloid formation and/or aggregation;
- (c) ~~concluding~~ determining, from the comparison in step (b) if the amount of  $\beta$ -amyloid variant determined in step (a) is greater than the amount of said variant typically present in control samples, that whether the ~~mammal~~ patient is susceptible to or at risk of said disease associated with  $\beta$ -amyloid formation and/or aggregation.

27.-34. (Cancelled)

35. (Previously presented) The method of claim 26 wherein the post-translationally modified  $\beta$ -amyloid variant is modified by methylation or pyroglutamylation.

36. (Previously presented) The method of claim 35 wherein the methylation is present at position 1, 2, 4, or 6 of an N-terminal truncated  $\beta$ -amyloid variant.

37. (Withdrawn) The method according to claim 35 further characterized in that the pyroglutamylation is present at position 3 of an N-terminal truncated  $\beta$ -amyloid variant starting at position 3 of  $\beta$ -amyloid.

38. (Cancelled)

39. (Cancelled)

40. (Currently amended) The method of claim 26 wherein ~~at least one of the first and second samples~~ the sample is a brain extract sample ~~or a body fluid sample~~.
41. (Currently amended) The method of claim 26 ~~[[40]]~~ wherein the ~~body fluid~~ sample is ~~a blood sample~~ or a cerebrospinal fluid (CSF) sample.
42. (Previously presented) The method of claim 26 wherein the disease associated with  $\beta$ -amyloid formation and/or aggregation is Alzheimer's disease (AD).
43. (Currently amended) The method of claim 42 ~~[[26]]~~ wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting  $A\beta(5-42)$  or  $A\beta(8-42)$  ~~in a body fluid sample obtained from the mammal~~.
- 44.-56. (Cancelled)
57. (Currently amended) The method of claim ~~[[56]]~~ 26 wherein said  $\beta$ -amyloid variant is  $A\beta(4-42)$ .
58. (Previously presented) The method of claim 26 wherein the post-translationally modified  $\beta$ -amyloid variant is modified by methylation.
59. (Previously presented) The method of claim 58 wherein the methylation is present at position 4 of an N-terminal truncated  $\beta$ -amyloid variant.
60. (Currently amended) The method of claim 42 ~~[[26]]~~ wherein the susceptibility to Alzheimer's disease (AD) or the risk of developing AD is determined by detecting  $A\beta(5-42)$  ~~in a body fluid sample obtained from the mammal~~.
61. (Previously presented) The method of claim 26 wherein the amount of N-terminal truncated and/or post-translationally modified  $\beta$ -amyloid variant is determined by 2-D electrophoresis or mass spectrometry or both.
62. (Cancelled)

63. (Previously presented) The method of claim 26 wherein the amount of the N-terminal truncated and/or post-translationally modified  $\beta$ -amyloid 42 ( $A\beta_{42}$ ) variant is detected using an antibody that binds an epitope at the N-terminus of said variant.
64. (New) The method of claim 26 wherein the disease associated with  $\beta$ -amyloid formation and/or aggregation is mild cognitive impairment (MCI) progressing to Alzheimer's disease.